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10/001,692	10/25/2001	Griffith D. Neal	8864/29	3164

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BRINKS HOFER GILSON & LIONE
P.O. Box 10395
Chicago, IL 60610

EXAMINER

KIM, PAUL D

ART UNIT PAPER NUMBER

3729

DATE MAILED: 09/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/001,692

Applicant(s)

NEAL ET AL.

Examiner

Paul D Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-60 is/are pending in the application.
- 4a) Of the above claim(s) 1-14, 18, 23, 27, 29-31 and 33-59 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-17, 19-22, 24-26, 28, 32 and 60 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/17/2001 and 08 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/8/04
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This office action is a response to the restriction requirement filed on 7/2/2004.

Response to the Restriction Requirement

1. Applicant's election with traverse of Group I, claims 15-17, 19-22, 24-26, 28, 32 and 60, in the reply filed on 7/2/2004 is acknowledged. The traversal is on the ground that all the claims as filed would not require additional searching, all related to methods for manufacturing a hard disk drive, not place any undue burden on the patent office. This is not found persuasive because these inventions (Group I, II and III) are distinct for the reasons given last office action mailed on 4/29/2004 and also Group I is a method of manufacturing a base plate intended to use for the hard disc drive. In other word, the base plate of Group I can be use as a circuit board of an electrical device. Group II and I also have different processes such that Group II has separate utility such as processes of forming a miniature hard disc drive including substantially encapsulating the stator, the actuator assembly housing and the base plate with a phase change material to form a unitized body and forming the miniature hard disc from the unitized body. Group III has separate utility such as processes of manufacturing a hard disc drive including providing a metal strip which comprises at least one base plate and one cover and injection molding a phase change material to form a monolithic body on the base plate and cover. However, the recitation of claim 53 is also not limited only for the process of manufacturing the hard disc drive. It could be manufacturing process of any electrical device. Therefore, these inventions are distinct for the reasons given

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above because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

The requirement is still deemed proper and is therefore **made FINAL**.

2. Claims 1-14, 18, 23, 27, 29-31 and 33-59 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 7/2/2004.

Drawings

3. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the drawings are drawn by hand sketched and hard to recognize. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

4. The drawings were received on 4/8/2004. These drawings are not accepted.

5. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the

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applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

6. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors such as the phrase "nitrideThe" as described in line 23 of page 8 of the specification appears to be --nitride. The--. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

7. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: --A METHOD OF MANUFACTURING A BASE PLATE FOR A MINIATURE HARD DISC DRIVE--.

Claim Objections

8. Claims 15-17, 19-22, 24-26, 28, 32 and 60 are objected to because of the following informalities:

The phrase "multiple base plates" as recited in line 6 of claim 32 is not clear whether the multiple base plate is the same limitation recited in line 3, a plurality of base plates, or not. Appropriate correction is required.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claim 32 is rejected under 35 U.S.C. 102(b) as being anticipated by Natsuume et al. (JP 59215843 A).

Natsuume et al. teach a process of making a base plate comprising steps of: providing a metal strip (7) and feeding the strip continuously through an injection molding machine to be cut to form a plurality of plates and to injection mold a monolithic body layer of phase change material (10, resin) on the each plate as shown in Figs. 1-8 (see also abstract).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 15-17, 20-22, 24-26, 28 and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Natsuume et al. in view of Viskochil (US PAT. 5,650,896).

Natsuume et al. teach all of the limitations as set forth above except characteristics of the phase change material. Viskochil teaches a injection molding

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process including injection molding using a thermoplastic resin such as RYTON, which could be changed from a liquid to a solid due to change in temperature or chemical reaction in order to hermetically encapsulate two different parts together (see also col. 6, lines 7-28). Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify a process of fabricating a base plate of Natsuume et al. by using a thermoplastic resin such as RYTON as taught by Viskochil in order to hermetically encapsulate two different parts together.

As per claims 20-22 and 24-26 since a polyphenylene sulfide thermoplastic resin of Viskochil is used for the phase change material such as RYTON. Even though Viskochil does not specify the characteristics of the RYTON, at the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to apply the phase change material as recited in the claimed invention because Applicant has not disclosed that the phase change material as recited in the claimed invention provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with Viskochil because the phase change material as recited in the claimed invention would perform equally well with the phase change material in Viskochil. Therefore, it would have been an obvious matter of design choice to modify the phase change material of Viskochil to obtain the invention as specified in claim 3.

As per claim 28 the body features formed on the plate of Viskochil can be flanges, lips, grooves and connectors as shown in Fig. 6.

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As per claim 60 the strip is used as a carrier as shown in Figs. 1 and 5.

13. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Natsuume et al. in view of Viskochil, further in view of Understiller et al. (US PAT. 5,966,7996).

Natsuume et al., modified by Viskochil, teach all of the limitations as set forth above except the phase change material including ceramic particles. Understiller et al. teach a process of molding a component including a thermoplastic molding material such as RYTON, which is included ceramic particles in order to improve the process for making the injection molded part. Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify a phase change material of Natsuume et al., modified by Viskochil, by the phase change material including ceramic particles such as RYTON as taught by Understiller et al. in order to improve the process for making the injection molded part.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul D Kim whose telephone number is 703-308-8356. The examiner can normally be reached on Tuesday-Friday between 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 703-308-1789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Paul D Kim
Examiner
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